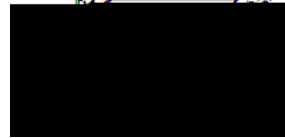




Product Summary

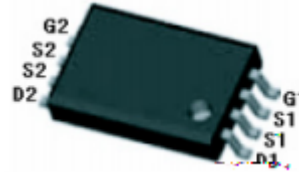
The ZMD68203TS combines advanced trench MOSFET technology with a low resistance package to provide extremely low $R_{DS(ON)}$. Two P Channel MOSFET inside for dual DIE implication.

$V_{DS1} = 20V$
 $V_{DS2} = 20V$
 $R_{DS(ON)1} = 8.5m$
 $R_{DS(ON)2} = 8.5m$
 $I_{D1} = 14A$
 $I_{D2} = 14A$



density Trench technology
 $R_{DS(ON)}$ to minimize conductive loss

Dual DIE in one package



TSSOP-8

Power Management

Load Switch

Part NO.	ZMD68203TS
Marking	ZMD68203T
Packing Information	REEL TAPE
Basic ordering unit (pcs)	4000

P Channel Absolute Maximum Ratings $T_c = 25$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 12	V
Continuous Drain Current	$I_{D@TC=25}$	14	A
	$I_{D@TC=75}$	10.4	A
	$I_{D@TC=100}$	8.8	A
Pulsed Drain Current	I_{DM}	30	A
Total Power Dissipation($TC=25$)	$P_D@TC=25$	3.6	W
Total Power Dissipation($TA=25$)	$P_D@TA=25$	0.69	W
Operating Junction Temperature	T_J	-55 to 150	
Storage Temperature	T_{STG}	-55 to 150	
Single Pulse Avalanche Energy	E_{AS}	50	mJ

**Thermal resistance**

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	R_{thJC}	-	-	34	° C/W
Thermal resistance, junction - ambient	R_{thJA}	-	-	180	° C/W
Soldering temperature, wavesoldering for 10s	T_{sold}	-	-	265	° C

Electronic Characteristics

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=250\mu A$	20			V
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{GS}=V_{DS}, I_D=250\mu A$	0.3		1	V
Drain-Source Leakage Current	I_{DSS}	$V_{DS}=20V, V_{GS}=0V$			1.0	μA
Gate- Source Leakage Current	I_{GSS}	$V_{GS}=\pm 12V, V_{DS}=0V$			100	nA
Static Drain-source On Resistance	$R_{DS(ON)}$	$V_{GS}=4.5V, I_D=14A$				
		$V_{GS}=2.5V, I_D=10A$				
Forward Transconductance	g_{FS}	$V_{DS}=10V, I_D=10A$				
Source-drain voltage	V_{SD}	$I_S=14A$				

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Input capacitance	C_{iss}	$f = 1MHz$	-	1050	-	pF
Output capacitance	C_{oss}		-	250	-	
Reverse transfer capacitance	C_{rss}		-	120	-	

Gate Charge characteristics($T_a = 25$)

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Total gate charge	Q_g	$V_{DD}=25V$	-	12	-	nC
Gate - Source charge	Q_{gs}	$I_D=8A$	-	2	-	
Gate - Drain charge	Q_{gd}	$V_{GS}=10V$	-	5	-	



P Channel characteristics curve

Fig.1 Power Dissipation Derating Curve

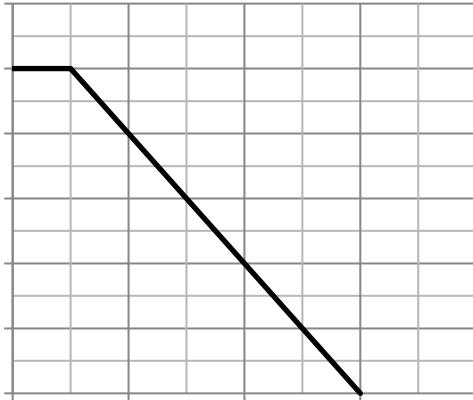


Fig.2 Typical output Characteristics

Fig.3 Threshold Voltage V.S Junction Temperature

Fig.4 Resistance V.S Drain Current

Fig.5 On-Resistance VS Gate Source Voltage

Fig.6 On-Resistance V.S Junction Temperature



Test Circuit

Fig.1 Switching Time Measurement Circuit

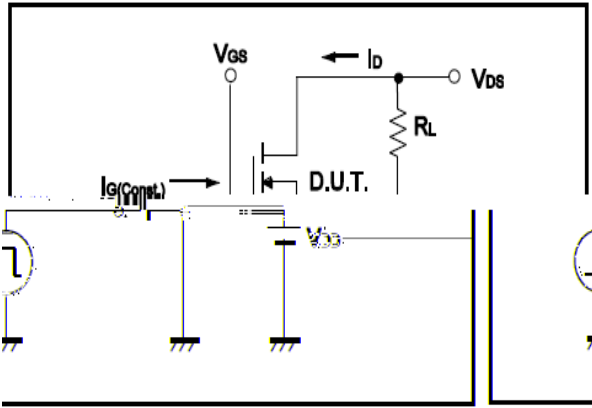


Fig.2 Gate Charge Waveform

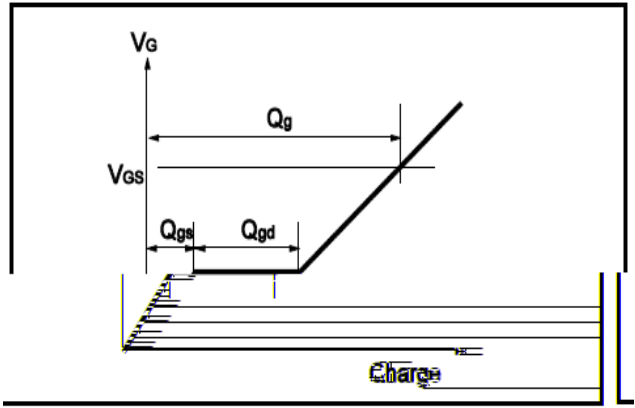


Fig.3 Switching Time Measurement Circuit

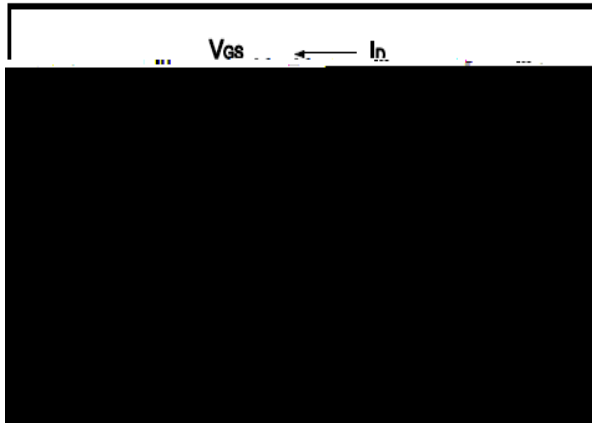


Fig.4 Gate Charge Waveform

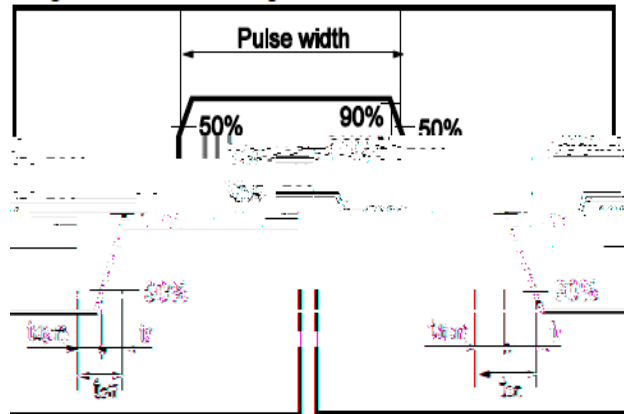


Fig.5 Avalanche Measurement Circuit

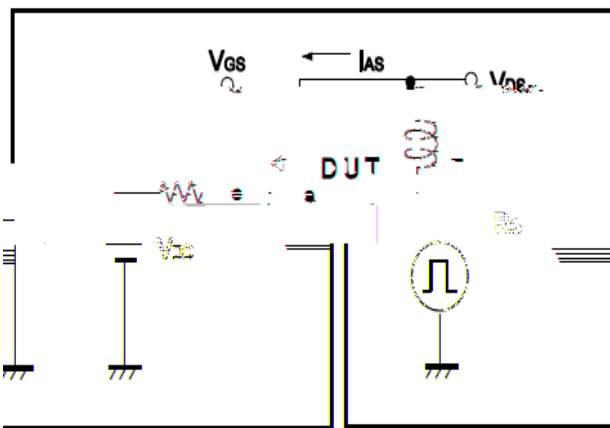
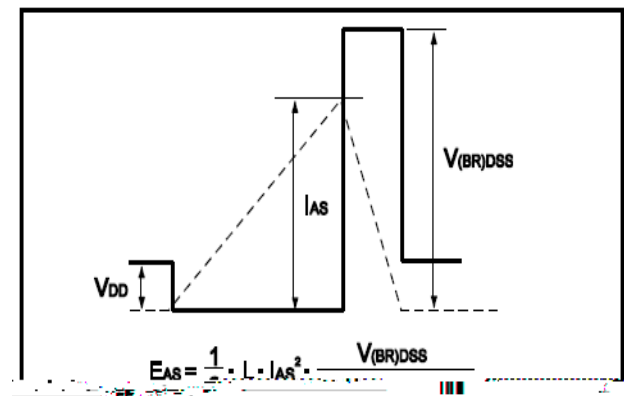


Fig.6 Avalanche Waveform





(TSSOP-8)

Unit: mm

Symbol	Dimensions In Millimeters	
	Min	Max
D	2.900	3.100
E	4.300	4.500
b	0.190	0.300
c	0.090	0.200
E1	6.250	6.550
A		1.100
A2	0.800	1.000
A1	0.020	0.150

